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ABSTRACT

This report covers the objectives, procedures, and findings of four major projects directed by the Experimental Manpower Laboratory for Correction (EMLC): (1) Token Economy (Ecology) Project, (2) Correctional Officer Training Project, (3) Longitudinal Follow-Up Studies, and (4) Information Dissemination and Utilization Project. EMLC grew out of an earlier project conducted to test the feasibility of using programed instruction in basic education classes for male felons. Included are an overview of the project, a discussion of the problems encountered in its operation and development, and announcements of proposed directions for phase IV studies. (Author/SN)

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EXPERIMENTAL MANPOWER LABORATORY FOR CORRECTIONS

final report

REHABILITATION
RESEARCH
FOUNDATION

September, 1971 - February, 1973

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This report covers the four major projects of the Experimental Manpower Laboratory for Corrections (EMLC): (1) Token Economy (Ecology) Project, (2) Correctional Officer Training (COT), (3) Longitudinal Follow-Up Studies, and (4) Utilization. Project objectives and a summary of procedure are included, as are findings and data for those projects in which analysis is complete. A brief history of the EMLC is presented in the introduction to this report; the concluding section capsulizes project findings, problems encountered, and proposed directions for Phase IV studies. The various products completed in Phase III are listed and annotated.

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Individualized Reading System for Adults (IRSA)
Longitudinal Follow-Up Studies
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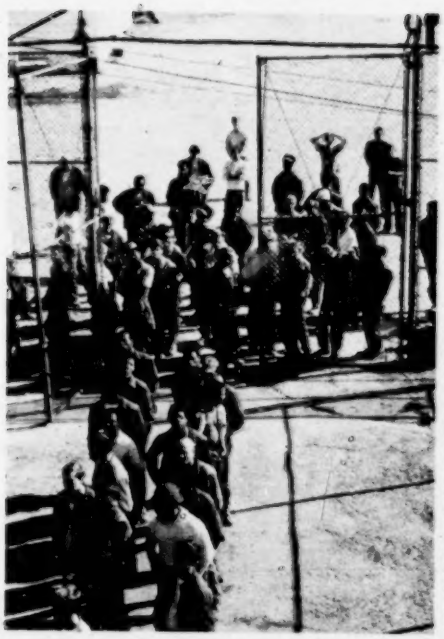


Rehabilitation begins in institutions like this . . .

introduction

The EMLC

The present Experimental Manpower Laboratory for Corrections (EMLC) grew out of an early programmed learning project conducted by the Rehabilitation Research Foundation (RRF) at Draper Correctional Center in Elmore, Alabama. This project, which operated between 1961 and 1964, tested the feasibility of using programmed instruction in basic education classes for adult male felons. This project was successful; several inmates even began writing their own programs for areas in which no such instruction existed.

Once working in the institution, however, the RRF found that basic education was only one area in which the inmates were deficient. Vocational training was also a critical need. But because prison inmates had not been considered a part of the unemployed labor force at which MDTA was aimed, no such training programs existed in the institution.

Between 1964 and 1968 the RRF contracted with the Department of Labor to conduct a series of projects at Draper which were later known as the Draper Project. These were similar in nature and purpose to those conducted at the federal reformatory in Lorton, Virginia, and at the city jail at Rikers Island, New York. These projects tested the feasibility of operating MDTA training programs in the respective types of correctional institutions.

The projects at the three institutions accomplished to some degree what they had proposed to do. MDTA training was found to be operable in correctional institutions, with some modification necessary to accommodate the nature and special needs of the inmate population. The modification that evolved helped to structure amendments (Section 251) to MDTA in 1966 which authorized manpower training for a broad number of institutionalized offenders.

It had become apparent, however, that long-range assessment of various program components was necessary, an assessment which would require a vehicle of a slightly different nature than that of the E&D approach. The RRF contracted with the Manpower Administration to conduct a number of studies with the prison population, assessing the needs of this population, evaluating program effectiveness, and exploring additional possibilities for rehabilitation programs. This was the beginning of the EMLC.

Many of the EMLC projects in Phase I (1968-70) examined the relationship of the released offender to the community, particularly in terms of adjustment problems. One project centered on employment barriers the offender encountered, determining which of these could be overcome in the institutional training programs. Another project provided small grants to ex-offenders to assist them in establishing themselves in the community, but found that the availability of these funds made little difference in training-related placement. Intensive follow-up services for a small group of trainees were provided in another project, studying the environmental support available to the ex-offender in the community.

Two other Phase I studies laid the foundation for projects which have continued through Phase III. One of these investigated the effect of the prison environment on the training program. A correlation was found between the amount of accurate information institution personnel had about the program and their attitude toward it, a finding which led to the correctional officer training program begun in Phase II.

The other study was the '69 Follow-Up, which evolved from the project dealing with community environmental support. The Follow-Up study sought to develop a methodology for systematic longitudinal

follow-up which would establish a behavioral demography of the released or paroled offender, evaluate MDT training, and develop instruments predictive of law violation, criminal behavior, and recidivism. Data analysis for this study continued into Phase III of the Lab.

The Phase II (1970-71) projects were much more institutionally oriented than those of Phase I, in an attempt to forestall postrelease adjustment problems through institutional treatment programs. These projects also sought to incorporate many of the behavior modification concepts which were proving successful in other settings, e.g., mental institutions. The MDT training project was individualized to better meet the needs of the trainees, resulting in greater training efficiency. The project had originally proposed to completely train 95 men and partially train 20 others; instead, the project was able to completely train a total of 123 men.

Part of this efficiency was attributed to the concurrent contingency management study which explored ways of motivating our experimental groups of prison inmates, comparing time-contingent payoff to performance-contingent payoff. The study data suggested that the more payoff was contingent on performance, the higher the level of that performance would be.

Recognizing the important influence of institutional experiences on the offender, the EMLC sought to control these experiences and provide a total environment for rehabilitation by establishing a token economy in the institution. This Ecological Unit occupied one cellblock in the institution and demonstrated that the token economy was a successful alternative to aversive control as a means of managing and motivating prison inmates.

To capitalize on the influence of the institutional staff upon the inmates, the EMLC conducted two cycles of correctional officer training (COT) in Phase II. This training introduced the officers to the use of behavior modification techniques as an alternative to punishment and aversive control. Ultimately, these trained officers would be able to administer, with the proper supervision, a program of institutional treatment based on behavior modification principles.

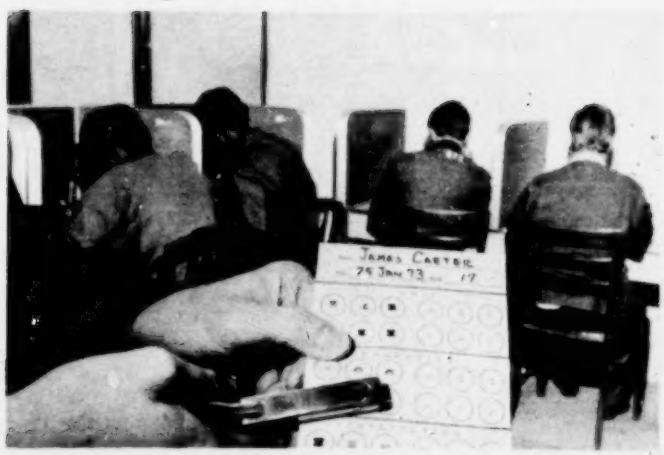
The '69 Follow-Up from Phase I was extended into Phase II, then followed by a more refined study, the '71 Follow-Up. This study was designed to provide replication for the earlier study and evaluate the effect of various EMLC projects' components on recidivism and employment.

Phase III of the EMLC, the period covered in this report, expanded and refined the studies begun in the previous phase, emphasizing even more the behavioral orientation of the Lab. The token economy study in Phase II had been limited to behaviors on the Ecological Unit, but in Phase III was expanded to include behaviors occurring in other areas of the institution. The contingency management study became a sub-study, providing the basic education component of the Ecological Unit. Additionally, an institutional check system was begun by the Draper staff to motivate farm performance. The token economy section of this report begins on page 12.

Correctional officer training continued, with the third cycle providing the tryout for a package of self-instructional booklets designed to teach the officers the use of behavior modification techniques. Evaluation of this method of instruction was complicated when difficulties arose concerning the practicum phase of the training. This was the phase in which the officers were to have had an opportunity to use their new skills under Lab supervision. COT is described in the section beginning on page 12.

A key activity throughout all the phases of the EMLC has been utilization. While the Lab's chief commitment is to the design, implementation, and evaluation of experimental programs, an increasingly important effort is that of dissemination for utilization. Throughout the existence of the Lab, products such as reports, "how-to" manuals, professional papers, and programmed lessons have been prepared and distributed to influence positive change within the context of correctional manpower problems. Two educational systems, the Individually Prescribed Instructional System for basic education and the Individualized Reading System for Adults, have been developed and are being revised. More regular and continuing means of dissemination include orienting visitors on site, delivering presentations in the community and at professional meetings, and university teaching. Two newsletters have also aided in dissemination. These activities are described in more detail in the section starting on page 12.

A general discussion of some of the findings and problems encountered in Phase III, plus a brief description of the proposed studies for Phase IV, are found in the section beginning on page 12.



Punch cards typify the token economy techniques used for behavior change and institution management.

token economy (ecology) project

The Token Economy in Corrections

The EMLC's decision to explore the feasibility of applying the token economy model in corrections was made in response to the success of this model in other settings, e.g., the military and mental institutions. The studies in these settings had demonstrated the effectiveness and efficiency of the token economy in changing behavior: once the target behavior was selected and procedures instituted which followed the principles of behavior, behavioral change occurred. In addition to being efficient and effective, the token economy was economical, taking advantage of existent reinforcers.

For the correctional institution, with its meager budget, these advantages are particularly attractive. The efficiency of the token economy model is in effect doubled in the correctional setting, since the institution's goals of treatment and custody can be met simultaneously: behavior can be both *motivated* and *managed* by token economy procedures. Additionally, this model can use reinforcers presently available in the institution, many of which are cost-free (e.g., admittance to a work-release program). And, as a spinoff, the token economy is the kind of system that, once demonstrated and established in the institution, can be administered by the present line staff, with appropriate supervision. Thus the application of the token economy in corrections can be seen to have many advantages, but prior to the EMLC's study it was not known if this application was feasible.

First Cycle Accomplishments

During Phase II the EMLC developed and implemented the first token economy in an adult correctional institution, housed in a separate cellblock of the prison. The first cycle of this study was designed as a test of the feasibility of establishing a token economy within the institution and focused on three general types of behaviors: vocational training, basic education, and self-management skills development. These behaviors were identified, measured, and then treated by manipulating their consequences. The behavior modification procedures applied were found to be effective in inducing the desired behaviors–behaviors which are traditionally insured by threat of punishment and aversive control. Thus the token economy was demonstrated to be a viable alternative method of managing inmate behavior. The first cycle also provided the foundation for the development of a model which could be exported for use in other correctional settings.

Objectives of the Second Cycle

Having demonstrated the feasibility of establishing a token economy in this setting, the Lab proposed to expand the scope of the token economy in Phase III to include more behaviors which appear critical to postrelease success. This expansion would provide a basis for determining the practicality of adopting the model on an institution-wide basis, employing the diverse resources of the institution as back-up reinforcers. Three preliminary objectives for the second cycle of the token economy were postulated:

1. *Work Assignments. The use of aversive control procedures to stimulate inmates to complete work assignments and the use of work assignments as punishment would be replaced by motivational techniques more consistent with those used in the 'free world.'* It was proposed that inmates

participating in the token economy hold institutional jobs and earn an hourly "wage" (via the medium of the token economy). Data would be collected on a number of work criteria (punctuality, productivity, etc.), and promotions and demotions (in terms of both responsibility and "pay") would be based upon work performance. This procedure would provide a continuity of behavior from the institution to the community and allow the inmate to experience recognition and encouragement for initiative and diligence in work performance.

2. *Basic Education. The structure of the token economy would be applied on a wide scale to the management and motivation of basic education.* Inmates residing in the experimental cellblock and enrolled in the basic education training programs conducted by the EMLC would earn performance-contingent "wages" (via the medium of token economy). The educational program would be self-paced, using the Individually Prescribed Instructional (IPI) System developed by the Lab.

3. *Expanding the Reinforcement Menu. To increase the exportability of the token economy, the range of back-up reinforcers would be expanded to take advantage of more of the resources available in the institution.* It was proposed that all aspects of institutional life which could serve as cost-free consequences of behavior be incorporated into the structure of the token economy. Such privileges as improved job assignments, reduced custody status, and admission to work-release programs would be potentially powerful additions to the reinforcement menu of the token economy. If direct control of these variables was possible, it would be exercised. Otherwise, letters of recommendation to those agencies controlling such reinforcers would be made performance-contingent.

4. *Development of Self-Maintenance Skills. Essentially in replication of an objective of the earlier cycle of the study, behavior modification procedures would be directed at certain skills deemed important for successful postrelease adjustment.* Various reinforcers would be made contingent upon these behaviors to determine the most effective means of developing such skills. The expansion of the reinforcement menu, mentioned above, would be directly linked to this objective.

As the second cycle of the token economy study progressed, the degree of emphasis among the original objectives was adjusted, and certain entirely new objectives were added. Among these was a brief study in the effects of punitive control, an evaluation of an alternative token economy attempted by the institution itself, and an extended study in engineering the token economy for success.

Operating the Token Economy

The second cycle of the token economy study covers a period of nearly 400 days. More than 125 inmates participated in the study for varying lengths of time. The participants were randomly selected from a pool of eligible inmates–the criteria for eligibility being that they be first-time adult felons, under 30 years of age, physically able to work on the prison farm, and eligible for release or admission to vocational training or work release within three months of the termination of the cycle. The racial distribution approximated that of the general prison population–about half black and half white. Additional subjects were assigned to the Unit by the prison administration. The experimental cellblock, called the Ecological Unit, housed a maximum of 40 men, with an average population of about 30. The men earned tokens (points) by engaging in

preselected activities, and exchanged these points for such reinforcers as items from the Unit store or time in recreational areas.

Behavior occurring on the Unit was a target for intervention in both cycles. The activities were divided into two types considered to be necessary components of successful functioning in the "free world" and/or the correctional institution: (1) self-maintenance skills, which include such things as maintaining a neat personal appearance, bed making, keeping the immediate living area neat and clean, and contributing to the maintenance of the common living area; and (2) educational behaviors, which were activities specifically related to learning, whether reading a book or participating in a basic education program.

In the first cycle intervention was limited to Unit activities, but the project design of the second cycle was expanded to include activities off the Unit. The Unit residents divided their day between the Unit, the project's basic education component, and the institution farm; their behavior was observed in all three places. The performance of self-maintenance tasks was reinforced on the Unit, educational activities were reinforced in the basic education component, and performance on institutional job assignments was reinforced on the farm. Thus the influence of the token economy was expanded to manage behavior occurring in the institution as well as on the Unit.

In the first cycle a checkbook system was used--the points the men earned for socially adaptive behaviors were in a checking account, and the men wrote checks for the reinforcers they selected. The second cycle replaced the checkbook system with a punch card system. Each day a new card was issued to each man. His card was punched as he earned points and marked as he exchanged these points for various reinforcers. Any points remaining at the end of the day were transferred as "savings" to the next day's card. This system provided immediate, tangible reinforcement, simplified record keeping, and enabled the men to determine their "balance" at any time by looking at their cards.

Data collection for the second cycle was begun on January 22, 1972, on performance in the Ecological Unit and the institution farm, and on March 21, 1972, in the basic education program. This was a baseline (pre-experimental) period prior to the experimental/treatment phase, which commenced July 10, 1972.

The Institution's Farm Credit System

As the projected starting date for the intervention phase of the token economy study approached, it was learned that the institution was planning a token-economy-like procedure to motivate farm work performance. On eight occasions during the day, correctional officers supervising the farm squads were to rate each inmate as to whether or not he was working at that particular time; if working, he earned one institutional credit. Additionally, each inmate received one credit each time he arrived promptly at the back gate of the institution for the twice-daily checking out to the farm assignments. Inmates working on the farm could thus earn a maximum of 10 institutional credits each day.

These institutional credits were to be exchangeable for certain reinforcers which are available in the institution and which had been determined to be meaningful to inmates. For instance, a total of 100 credits could be exchanged for: (1) a day off from work, (2) a conference with

the warden or classification officer, or (3) permission to make a telephone call. These opportunities would again be presented to the inmate following each accumulation of 100 credits. The third time he earned 100 credits, he might choose even more desirable reinforcers: (1) a scheduled job change or (2) a meeting with the Custody Board if he were eligible for a custody change. If he met with the Custody Board and had his security classification reduced to "minimum," he would then be eligible for participation in the institution's work-release and home furlough programs. Thus work performance on the farm had the potential of earning the inmate some very desirable rewards.

In the light of this unanticipated farm credit plan of the institution, it was decided to modify the plans laid for the research strategy of this cycle of the project, postpone the introduction of the intervention phase, and first evaluate the effectiveness of the institutional farm credit system. The revised experimental design, which employed a multiple baseline technique to make this evaluation, is shown in Chart 1.

As can be seen from this chart, inmates in the Ecology Project had the potential of earning 12 institutional credits per day: 4 on the farm (no credits were awarded to Unit residents for promptness at the back gate), 4 on the Unit, and 4 in the basic education program. Unit residents' institutional credit accounts were kept separately from their EMLC token economy accounts.

CHART 1
Experimental Design for Evaluation of Effectiveness of Institutional Farm Credit System

Areas of Inmate Performance Being Observed	Phases			
	Baseline Phase (began March 22, 1972)	Phase I (began May 22, 1972) Start institutional point system and continue for duration of project.	Phase II (began June 5, 1972)	Phase III (began June 19, 1972)
Farm	No credits awarded	4 credits contingent upon on-task behavior*	4 credits contingent upon on-task behavior (no change in contingencies)	4 credits contingent upon on-task behavior (no change in contingencies)
Ecological Unit	No credits awarded	4 credits awarded non-contingently	3 credits contingent upon completion of convenience behaviors and 1 credit contingent upon Unit maintenance behaviors (change in contingencies)	3 credits contingent upon completion of convenience behaviors and 1 credit contingent upon Unit maintenance behaviors (no change in contingencies)
Basic Education Program	No credits awarded	4 credits awarded non-contingently	4 credits awarded non-contingently (no change in contingencies)	4 credits contingent upon on-task behavior (change in contingencies)

*The credits are awarded on a per man, per day basis.

In order to make an evaluative comparison of the token economy as administered by the institution with the one operated by the Lab, the same multiple baseline technique was used to implement the EMLC token economy in each of the three observation areas. The EMLC points were exchangeable for a variety of back-up reinforcers which were available on the Unit. For example, inmates were charged one point for every 100 minutes spent in the various reinforcing event rooms, and one point for every 50 minutes spent off the Unit. In the token economy "store," each point was worth about 5 cents, with a cup of coffee (the least expensive item) selling for one point and a pack of cigarettes (the most expensive item) selling for nine points. A maximum of 8 points per day could be earned on the farm, 8 on the Unit and 8 in the basic education program.

The institution credits were applied sequentially to the farm work, performance on the Unit, and performance in the basic education area. Only on the farm did a clear effect appear–the proportion of time the men spent working at the assigned task *declined* steadily throughout the time the credits were awarded contingent upon the men remaining at their task.

In contrast, when the EMLC points were introduced, again sequentially (see Chart 2), to the

CHART 2
Research Design of the EMLC Token Economy Project

Areas of Inmate Performance Being Observed	Phases			
	Phase I (began July 10, 1972) EMLC Token Economy began and institutional point system continued.	Phase II (began August 7, 1972)	Phase III (began September 5, 1972)	Phase IV (began October 2, 1972)
Farm	EMLC tokens contingent upon on-task behavior	EMLC tokens contingent upon on-task behavior (no change in contingencies)	EMLC tokens contingent upon on-task behavior (no change in contingencies)	EMLC Token Economy and institutional point system continue; projects designed to deal with special problems begin
Ecological Unit	EMLC tokens awarded non-contingently	EMLC tokens contingent upon completion of convenience behaviors and Unit maintenance behaviors (change in contingencies)	EMLC tokens contingent upon completion of convenience behaviors and Unit maintenance behaviors (no change in contingencies)	
Basic Education Program	EMLC tokens awarded non-contingently	EMLC tokens awarded non-contingently (no change in contingencies)	EMLC tokens contingent upon on-task behavior (change in contingencies)	

farm work, performance on the Unit, and performance in the basic education area, an entirely different trend developed. Performance on the farm returned to its original, relatively high level; performance of the Unit self-maintenance tasks exhibited a striking increase; and performance in the basic education area, already at a fairly high level, also increased somewhat.

Perhaps the marked difference in the effect of the two systems results from the choice of potential reinforcers, as there are others available within the institution, e.g., opportunity to participate in prison education and training programs. Individualizing the potential reinforcers by providing a reinforcement "menu" is also a possibility.

More likely, though, the less-than-systematic approach of the farm credit system is largely responsible for its ineffectiveness. Project staff observed many instances of the failure of the correctional officers to follow the procedures which had been established for awarding points, indicating an unfamiliarity with the procedures or an unawareness of the importance of following these procedures. Perhaps the planning for the farm credit system did not include enough provision for staff training and supervision. The apparent success of the Ecology Project may be due, in large part, to its systematic approach and a high level of staff commitment.

Contingency Management in Basic Education

The contingency management sub-study provided the basic education component of the token economy, seeking to determine the most efficient means of motivating study behavior. The principal measures of this behavior were: (1) on-task behavior--the percentage of times the student was observed in study position, (2) efficiency quotient--the ratio of tests passed divided by tests taken, and (3) learning rate--the actual time spent studying a module of work divided by the time estimated for that module by the IPI System. The first two of these are investigated as dependent variables; the learning rate serves as an indicator of a continued stable state.

When the points available in the token economy were made contingent upon the student remaining in study position, the on-task measure (though already at a relatively high rate) increased. When the contingency was removed, the rate returned to approximately its original level. When the points were made contingent upon passing the module tests the first time they were taken, the number of tests passed on first attempt increased somewhat, and the increase was reversed when the contingency was removed.

The average number of points earned each day by the students in the basic education program dropped severely during the phase of the study during which earnings were contingent upon passing posttests the first time taken. None of the learning measures suffered. In terms of efficiency (response/cost), therefore, the more desirable of the two contingencies was payoff on the basis of tests passed rather than remaining on-task in the study area. The students learned just as well at a decreased cost to the token economy.

Self-Management Skills

As in the first cycle of the token economy study, certain self-management skills were designated as target behaviors in the motivation and management system. The skills included making the bed, keeping the immediate living area neat and clean, keeping one's personal appearance presentable, and volunteering for and completing a Unit clean-up job.

The procedure for awarding points for completion of these tasks was designed to provide immediate feedback to the resident. Each morning, before leaving the Unit for his farm assignment or for the basic education area, the resident would complete the specified tasks and report their completion to the staff member on duty. The staff member would check the job, praise the resident for the tasks which were completed, and punch the appropriate number of points onto the resident's card (two points for each of the four self-management skills areas). The EMLC point system clearly demonstrated its ability to motivate behavior change. It also served the management function of a token economy--the Ecological Unit was considered by the institutional administration to be of exemplary cleanliness.

Expanding the Reinforcement Menu

During this cycle of the token economy study, an in-depth analysis of the available back-up reinforcers within this particular setting was conducted. The reinforcers provided by the Unit store had been shown to be effective, but the exportability of the token economy model would be increased if the resources of the institution were available for use as back-up reinforcers. Since the environmental contingencies which appeared most desired by the inmates were controlled by the relatively autonomous correctional system, the most influential route available to the token economy staff was that of providing performance-contingent letters of recommendation. Whenever a participant in the token economy would request a letter of recommendation from the staff, a statement about the quality of his performance in each of the three observation areas--on the farm, on the Unit, and in the education area--would be prepared. This concept is in a preliminary developmental stage, and an evaluation of its effectiveness is not now available. However, it is clear that a great number of potential back-up reinforcers are available in the institution, either unused or applied in an indiscriminate manner, with little or no relation to behavior change.

Evaluating Punitive Control

Early in the baseline period of the token economy study, project staff had the opportunity to analyze the effectiveness of the institution's traditional approach to problem behavior, that is, punitive control. A *lassaiz-faire* approach to the self-maintenance behaviors was taken by the token economy staff during the baseline period, and it was soon clear that the base rate for making beds, cleaning the living areas, etc. was quite low with this population. The prison administration was particularly concerned about the unmade beds and decided that the residents would be forced to begin making their beds. A correctional officer assigned to the Unit for security purposes was instructed to "write up" a disciplinary report on anyone who failed to make his bed. If the inmate received a second disciplinary report, he would be transferred to another institution to be placed in solitary confinement on a restricted diet for a maximum of 21 days.

The results were immediate--practically all beds were made on the days this particular correctional officer was assigned to work on the Unit. However, a look at other measures of the inmates' behavior reveals what appear to be possible "side effects" of this control procedure. During the period of punitive control, the percentage of men volunteering for and completing Unit maintenance tasks decreased. Also, the number of disruptive incidents (fights, verbal abuse, etc.) increased. After termination of the threatening situation (the officer formerly assigned

to the Unit was reassigned), these measures returned to their baseline rates.

This is not, of course, a definitive study of the effects of punitive control, but it is an example. Voluminous reports of the inadequacies and side effects of aversive control in a wide range of settings are available. However, in this situation, the technique was seized upon as the immediate solution to the problem. Indeed, the correctional officer in question doubtlessly considered it to be successful, since he had made no provision to observe its possible side effects, and was not present to observe the deterioration in the bed-making behavior immediately upon the removal of the threat. In a sense, the correctional officer was reinforced for his use of aversive control: both by positive reinforcement (the immediate increase in the number of beds made) and negative reinforcement (termination of the wrath of the prison administration).

Engineering the Economy for Success

A key to the successful implementation of a behavior treatment regimen like the token economy is commitment to maintaining the power and precision of the system, even though this may increase the administrative work involved. A situation might arise in which a decision about procedures could lighten the administrative burden but would also reduce the effectiveness of the treatment. Experience and experimental evidence dictate that adherence to the principles of behavior must be the first concern if the mechanics of the intervention procedure are to achieve the objectives of the program.

A case in point would be the solution to a design weakness encountered in the second cycle of the token economy. The original procedure for paying for the use of the reinforcing event rooms (television, Ping-Pong, and pool) and spending time off the Unit proved to be inadequate. Many residents were finding that when the points used in the reinforcing event areas and off the Unit were totaled, they had used more points than they had earned. This was the result of a record-keeping procedure in which the men turned in time cards showing their use of the reinforcing event areas only when the cards were full, rather than each day. Men who were "overdrawn" were prohibited from using the token store until their "debts" were paid.

A change in the procedure then required the residents to turn in the time cards each day before the store opened, whether these cards were filled or not. This resulted in considerably more work for the project staff, but the number of men prohibited from using the token store diminished to near zero.

Other administrative problems are also susceptible to this sort of a functional analysis, and from these controlled manipulations, valuable information concerning the establishment of a token economy in other diverse settings may be generated.

Summary of Progress

The token economy study should be evaluated along four criteria: effectiveness, efficiency, generality and utilization, and stimulation of continued research. The following summarizes progress along these lines:

(1) Both the immediate and the long-term dimensions were considered in evaluating this study. The immediate effect is clear. Working with behaviors which are generally accepted as critical to postrelease success–work performance, educational advancement, and self-management skills development–notable improvements in behavior within the institution were

generated. The long-term effectiveness will be determined by the Lab's follow-up studies, which will show whether or not these behavioral changes generalize to the "free" environment and assist the participants in obtaining and holding jobs, taking part in productive social relations, and refraining from the activities which precipitated their incarceration.

(2) A major emphasis of the token economy study was to seek out and utilize those cost-free reinforcers which were already available in the institution. These are quite often the most powerful consequences of behavior, and quite often the least used. A preliminary analysis of such reinforcers was made which should aid greatly in increasing the efficiency of the token economy. In addition, it was demonstrated that when such back-up reinforcers as a token store are used, the economy of operation is often determined, in large part, by the precision of the contingency management techniques employed.

(3) The management/motivational system developed in this study was designed in such a way that it might be utilized in a wide range of situations. The final technical report will provide more details of the organization of the token economy, along with a practical list of the "do's and don'ts" of operating a token economy in a correctional institution. The attempt of the Draper administration to implement the system was faulty, but encouraging. It was clear that the prison administration recognized the power of the system; unfortunately, they did not have a guide to the development of a token economy, only respect for accomplishments they had observed in another token economy.

(4) Perhaps the most impressive outcome of the present study is its indication of *positive* research avenues. Principal among these are the development of an institution-wide token economy; the harnessing of powerful no-cost reinforcers such as parole, work release, and custody reductions; the application of these techniques to juvenile offenders before they become embittered and stigmatized by imprisonment; and community-based intervention programs which could use the token economy model to parallel and correlate with institutional programs.

In summary, the present study has shown effects *now* and has pointed the way toward future increased effectiveness; it has begun analyzing the reinforcers which are available in the correctional institutions; it has provided the basis for the development of an exportable "how-to" model; and it has suggested promising directions for further research.

Products

Products generated by the token economy and its basic education component, the contingency management study, include the following:

- *Token economy technical report*. Gives details of the study along with a list of practical considerations in operating a token economy in a corrrectional institution.
- *An ecological experiment in corrections: A programmed environment for behavior modification*. Describes the design of the token economy operated by the EMLC as a step toward merging the objectives of both custody and treatment under one set of behavioral control techniques.
- *Contingency management in a correctional institution*. Reports on the EMLC's use of contingency management primarily in basic education and the token economy study, but also as part of the content of the instruction

provided in the correctional officer training project.

- *The use of contingency management to affect learning performance in adult institutionalized offenders.* Discusses the use of contingency management techniques in basic education and vocational training classes at Draper. One of the six studies reported compares results obtained by contingency contracting with inmates and with academically deficient freshman nursing students.
- *Imprisoned resources–Innovative techniques in educating prison inmates.* Describes the design of a study which used educationally advanced inmates as one-to-one basic education tutors for inmate students, presenting implications for inmate educational programs.

Correctional officers can change inmate behavior; the first step is training.

correctional officer training (COT)

Previous Training Cycles

The influence of the correctional officer on inmates has generally been overlooked in treatment plans for the institution. Often he lacks the skills necessary to capitalize upon his potential role as an effective change agent working with the treatment team. Given the appropriate training and supervision, however, correctional officers should be able to effectively operate rehabilitation programs, for example, an institutional token economy. To determine the best way to aid the officers in acquiring the necessary skills, the EMLC has conducted three cycles of Correctional Officer Training (COT), teaching selected officers the principles of behavior modification.

Two cycles of training were completed in Phase II of the Lab. All the officers in the institution had indicated an interest in the training and were thus considered volunteers. From these men, a control group of 15 men and two 15-man training groups were then selected at random. Additionally, two officers from other Alabama correctional institutions joined the second cycle training group. The officer trainees spent several weeks in the classroom portion of the training before beginning the practicum exercises, which were conducted by the trainees in on-the-job situations arising from their institutional assignments. Considering the time spent informally in the practicum assignments, each man spent approximately 90 hours in the training program. These first two cycles of training are described in an interim report which was prepared in May, 1971.

Third Cycle Preparations

Preparation for the third cycle of COT began near the end of Phase II, when a series of booklets was planned which would present the classroom content of the training in a self-instructional, illustrated format. Considerable effort was devoted to developing an appropriate curriculum which would incorporate both textbook materials and knowledge gained from experience in the previous cycles of training. Work on the booklets carried over into Phase III; ten booklets dealing with the history of corrections and the principles and techniques of behavior modification were completed for tryout in the third cycle training.

Subject selection was also completed early in Phase III by a committee composed of the warden, classification officer, prison psychologist, COT project director, and two shift commanders (fellow officers) who had previously completed training. The trained officers were able to use their training experience in selecting the officers most likely to benefit from the training. The random selection of the earlier trainees had failed to take into account the amount of inmate contact each man had, an important consideration in making the training maximally effective. For the third cycle training, men who had such institutional assignments as tower duty and truck driving were eliminated in order to include other officers whose assignments allowed them more contact with the inmates. Twelve experimental and ten control subjects were chosen.

Pretraining assessment measures were taken to determine the characteristics of the trainee population. Measures which were to be administered only once, prior to training, included an IQ test, two achievement tests, and a demographic data gathering instrument. Some of the officers appeared as scheduled and took the IQ and achievement tests, but several officers were so apprehensive about the tests that they refused to take them. Since the EMLC staff believed that enough educational data had been obtained from the other cycles of training to establish a suitable level of approach for the training, the plans for IQ and achievement testing were discarded rather

than risk jeopardizing the relationship between the officers and the project staff by forcing the matter of testing.

Information concerning the officers' relationships with the inmates was also collected prior to training to provide a basis for posttraining assessement. The officers' interactions with inmates were recorded prior to training by two observers using the Behavioral Observation Index (BOI), a checklist instrument used to collect data on the frequency and kind of officer-inmate interactions. Pretraining assessment also included the use of the "M" technique in which a randomly selected group of 30 inmates ranked the correctional officer trainees along the dimensions of general caliber, fairness, concern about inmates' welfare, and punitiveness.

Characteristics of the Third Cycle Officer Trainees

Demographic characteristics for the officers participating in the third cycle training were found to be as follows: trainees and controls ranged, in rank, from entry-level officer to shift lieutenant (a position next in rank to the captain of the guards). Ninety-five percent of the officers had lived the greater portion of their lives in Alabama; 53% in Elmore County (the location of Draper) and 47% in bordering counties, most of which, like Elmore County, are agrarian oriented.

Officers ranged in age from 23 to 67 years, with a median age of 50. Ninety-five percent of the officers were married, and one was single. Their yearly incomes ranged from about $4,500 to $6,000. The reported educational levels of the correctional officers ranged from completion of the seventh grade to college graduate level. The median grade level was 11.

Training Progress

The actual classroom training of correctional officers began on May 31, 1972, after an address presented earlier by the Commissioner of the Alabama Board of Corrections. The classroom training lasted approximately five weeks, ending on July 5. Twelve men were to have been trained, but attrition for several reasons reduced this number to 10. Nine officers completed all ten of the instructional booklets; the remaining officer completed six.

The schedule of classroom instruction required each officer to complete two instructional booklets per week (one hour allowed for each booklet), to demonstrate that he had gone through each booklet systematically rather than randomly, and to attend a two-hour discussion session each week to comment on the materials being presented and any difficulties which might have arisen. Most trainees needed only an average of 30 minutes to complete a booklet rather than the full hour allotted, but the discussion sessions generally lasted the entire two hours. Each officer, as part of an incentive program unique to this cycle of training, could earn a maximum of $5 per week if he complied with the training schedule.

Each officer trainee took a pretest (called a *baseline check*) prior to beginning each booklet. After completing the booklet, he took the same test as a posttest (called a *progress check*). The word "test" was purposely avoided because of the anxiety exhibited earlier by the officers in regard to the IQ and achievement tests. Score comparison on these tests provided part of the training assessment; the overall gain from pre- to posttest on all ten booklets was 30.2%.

The classroom training was to have been followed by a four-month period during which each officer trainee would conduct a practicum exercise

in the institution or on the farm. These exercises were planned as a means of maximizing the effects of training in an on-the-job situation while aiding in the evaluation of the officers' ability to apply behavior modification techniques in the correctional setting. The practicums would also demonstrate that what the officers learned could indeed have a positive effect upon inmate behavior.

However, unforeseen changes in the institution administration and a shift in institutional concerns occurred near the end of the classroom portion of the training. Manpower in the Alabama corrections system, and especially at Draper, dropped to a critical low, and the officer trainees were needed to man critical security posts or to augment the farm crews. The final stages of COT were halted, and the officers were not allowed to begin their practicum exercises or the additional booklets which had been prepared. The additional booklets dealt with graphing and contracting for behavior, information which was necessary for the practicum exercises.

In late November, 1972, the Alabama Board of Corrections requested that the Lab evaluate the steps which would be required to complete the training. A plan was submitted to the Board in early December, 1972, which would involve the selection of 5 of the original 10 trainees to receive further classroom training and conduct practicum exercises. At this time no specific arrangements for training completion have been made, pending the approval of the Draper administration.

Final Report Prepared

Results of the third cycle of COT are contained in a final report which describes the experiences and evaluation outcomes for all three cycles of training. The first two cycles were evaluated on the basis of the practicum exercises and demonstrated that the officers were capable of applying behavior modification techniques. Additionally, several officers from the first two cycles were seen by staff observers and inmates as having changed after training in the direction of more frequent and more positive interactions with inmates. For example, when the inmate evaluation group ranked officers across selected measures of effectiveness, 16 of the 28 trained officers (57%) were mentioned "spontaneously" as contrasted with 18 of the 101 officers who had not received training (18%). Of these 16 trained officers, 10 (63%) were seen by the inmate group as increasing in their overall effectiveness in dealing with the inmate population. The available pre- and post-training data for the third cycle were analyzed, but this cycle of training was of necessity evaluated differently, since there were no practicums.

In addition to reporting the evaluation outcomes, the COT final report pinpoints specific problem areas in implementing a behaviorally oriented training program. Several solutions to these problems are offered as suggestions for institutions and agencies interested in conducting such training.

The Training Package

The number of booklets in the training package had originally been set at 10, and these booklets were prepared for the classroom portion of the training. However, as the training progressed, the plans were revised to include more of the training content in the booklets. This would be a decided advantage in implementing such training in other correctional institutions. The total number of booklets is now set at 20, plus an instructor's guide which will give a detailed account of how to implement the COT program. Each of the booklets is also illustrated for greater learning involvement.

All 20 of the booklets have been written, 15 have been printed, and the instructor's guide is being drafted. Revisions have begun on the first 10 booklets, based on questions and comments noted in the tryout.

Products

Several products have been prepared in connection with the Lab's experiences with COT. These include the following:

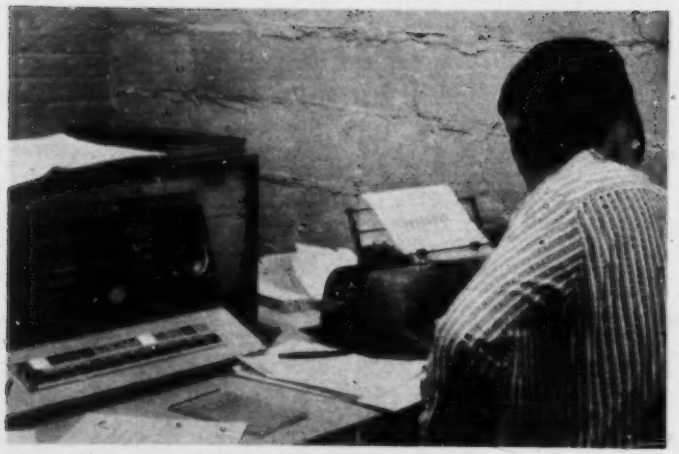
Correctional officer training in behavior modification: An interim report. Describes the first two cycles of COT; includes examples and results of specific projects dealing with inmate behavior.

A behavioral observation index (BOI) designed to evaluate training of correctional officers in a prison setting. Describes an instrument designed to objectively evaluate the interaction with inmates of correctional officers who have participated in COT. Includes instructions for its use and an explanation of behavioral principles.

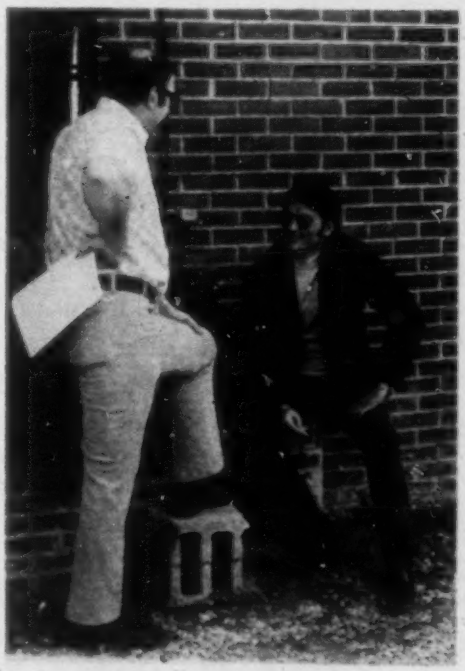
Training correctional officers in behavior management techniques: Methods, application, and effect. Reports on the first two cycles of COT and the then-present third cycle, emphasizing the special features of the third cycle training.

Correctional officer training package. Designed to provide correctional officers with a background in the history of corrections and a working knowledge of behavior modification principles and techniques, including graphing and contracting for behavior. Twenty self-instructional, illustrated booklets with an instructor's guide.

COT final report. Reports on the three cycles of correctional officer training conducted by the EMLC at Draper, using two methods of instruction. Evaluates the training by using several measures, including practicum exercises for the first two cycles.



Systematic follow-up evaluation leads to effective diagnosis and treatment.



longitudinal follow-up studies

The Need for Follow-Up

The ultimate measure of the effectiveness of an institutional treatment program is the behavior of the released offender–does his postrelease behavior indicate that he is indeed rehabilitated? Long-range follow-up of the released offender is necessary to answer this and other questions. What combination of events and behaviors, both in the institution and the community, differentiates the ex-offender who makes a successful societal adjustment from the one who returns to prison? Which institutional intervention and treatment programs are the most effective? What approach and what instruments can be used to best collect the data to answer these questions?

Despite the obvious need for information on the ex-offender's activities in the community, little systematic research has been conducted with regard to postrelease behavior. One reason for this is a confusion about what to measure and how. The EMLC uses a behavioral approach in its follow-up studies, seeking to develop and apply a methodology for measuring and assessing the behavior patterns of released offenders, as well as evaluating and validating institutional intervention programs. To measure behavior, instruments are being developed and refined which are predictive of the presence or absence of law violation, criminal behavior, and recidivism. In the process of developing these instruments, efforts are made to identify postrelease behaviors leading to recidivism and those conducive to successful societal adjustment. Additionally, it has been necessary to analyze the criterion of law violation and criminal behavior into its functional components. At the same time, identifying the factors involved in recidivism and criminal behavior provides specific bases for future intervention, treatment, and retraining programs, both in the institution and the community, by indicating the behavioral areas in which these are needed.

'69 Follow-Up

The first follow-up study conducted by the Lab, the '69 Follow-Up, was the initial step in the development of a systematic follow-up procedure. This study had three main objectives: (1) to establish a behavioral demography of the released offender; (2) to evaluate institutional MDTA training; and (3) to develop and refine instruments which would predict law violation, criminal behavior, and recidivism. Data were collected through face-to-face interviews with the study subjects, using an interview guide and other follow-up instruments.

The total number of releasees in the study was 173: 106 MDT trainees and 67 non-trainee controls who had applied for training. These men, located within a 200-mile radius of Draper, were interviewed prior to release and at 3-, 6-, 12-, and 18-month intervals after release. A small group of the study subjects, both MDT trainees and non-trainee controls, had settled within a 50-mile radius of Draper and participated in a more intensive part of the study; these men were interviewed once weekly over a period of 18 months.

Data analysis and interpretation were completed late in 1972, and a draft of the technical report was issued in January, 1973. The study found that employment was one of the most significant factors in postrelease adjustment. A released offender is much less likely to commit a law violation if he is employed and somewhat more likely to be employed if he has had institutional MDT training. While the effects of such training are small, there is a tendency for MDT trainees to work more and earn more money than men who did not receive training, at least in the first six months after release. The study also developed a systematic method of data collection and

record keeping which included the use of instruments predictive of law violation and recidivism.

Design Changes in the '71 Follow-Up

As a result of experience gained in developing the methodology of the '69 study, the '71 Follow-Up incorporated several changes in the study design to allow for more efficient use of staff time. For example, the geographic area covered by the '71 Follow-Up was limited to a 50-mile radius of Montgomery and Birmingham, two areas where Draper's releasees usually locate. This eliminated much of the time spent by the follow-up team in driving through rural areas to locate a few subjects. The subjects who settled in the study area were administered three interviews (prerelease, 3-6 month, and 12-15 month) rather than the five interviews previously used. Additionally, the postrelease interview guide was condensed in December, 1971, to structure a shorter and more systematic interview.

In the more intensive level of the study, some subjects were contacted and interviewed monthly in addition to the three standard interviews. The area for this portion of the study was reduced to a 25-mile radius of Montgomery. A procedure was instituted in January, 1972, in which these subjects were paid $2 for reporting to the downtown office for each of their monthly interviews. This change resulted in further reduction of travel expense as well as saving staff time, allowing the interviewers to concentrate on the more reluctant subjects.

To compare the effects of the various treatment programs, the '71 Follow-Up expanded the two groups of the '69 study (MDT and non-MDT) to five groups. Three of these were experimentally treated: MDT, ecological, and combination MDT-ecological. These were compared to a group of subjects who received training at the J. F. Ingram Trade School, located at nearby Frank Lee Youth Center, and to another group which received no training or experimental treatment.

Subjects

All of the 142 subjects in the '71 Follow-Up were Draper inmates who were released or paroled between October, 1970, and January, 1972. The men were quite typical of the Draper and Alabama prison population in terms of demographic characteristics. The overall mean age of the study subjects was 25, 58% were black, and 18% were married. They reported educational levels which averaged 9.4 years. Fifty-six percent of the men were serving time for crime against property; 44% were recidivists. Specific demographic data for each group are shown in Table 1.

TABLE 1

Comparison of Basic Demographic Data for the Five Study Groups

Demographic Data	Groups				
	MDT N = 58	Ecology N = 13	MDT & Ecology N = 16	State Trade N = 20	Control N = 35
Percent black	55	31	63	50	74
Percent married	17	31	19	20	14
Percent prior felonies	50	31	56	40	34
Percent paroled	69	54	88	90	63
Percent whose crimes were against property	66	62	38	50	49
Age					
Mean	25	27	26	21	25
Median	23	23	25	23	23
Range	17-46	20-54	20-34	19-42	19-47
Educational level (reported by subject)					
Mean	9.3	7.1	9.8	9.6	10.3
Median	9.0	6.0	9.5	10.0	10.0
Range	5-12	1-12	6-12	2-14	6-13

Follow-Up Instruments and Measures

Experience gained in the '69 Follow-Up study indicated a need for refinement of existing behavioral assessment instruments and development of others to cover additional aspects of behavior. The two primary instruments used in both follow-up studies were the Environmental Deprivation Scale (EDS) and the Maladaptive Behavior Record (MBR). The EDS is a 16-item scale which focuses on environmental input from a variety of areas such as occupation, organizations, and interpersonal relationships; the MBR, which also contains 16 items, deals with behavioral output in terms of maladaptive responses. Both have proven to be highly predictive of law violation and recidivism. The revised postrelease interview guide (IG) was also used. It contains over 100 items dealing with work experience, societal adjustment, criminal behavior, finances, family affairs, housing, and public acceptance.

Other behavioral assessment instruments were developed and refined during EMLC Phase III. The Weekly Activity Record (WAR) measures "free-world" behavior in terms of the way the ex-offender allocates his time on a weekly basis. This instrument was introduced late in the '69 study and indicated some differences in the way recidivists and non-recidivists spend their time. Another instrument, the Behavioral Incident Inventory (BII), focused on significant persons in the early life and developmental behavioral sequence of the individual. The need was also recognized for an overall diagnostic instrument which would delineate areas of potential strength while pinpointing areas of behavioral deficit and excess in which intervention and retraining were required. Some initial planning was made for the development of such an instrument.

In response to the many inquiries about the EMLC's follow-up instruments, a series of manuals for their use was begun. The first of these, a manual for the use of the EDS, was completed in October, 1972. The MBR manual and a behavioral interview guide were drafted and will be completed during the next phase of the Lab. Technical reports on the various instruments are also planned.

In analyzing the study data, the need became apparent for some means of categorizing law violation. The method adopted was the use of a continuum of degrees of law violation, with severity being reflected by the length of the sentence imposed. The continuum is divided into three main categories: no law violations, minor law violations (misdemeanors), and major law violations (felonies, i.e., recidivism). These categories have proven useful in the Lab's follow-up studies, but the continuum is being examined for possible revision and refinement.

Data Collection

All data were collected in behavioral interviews and were voluntarily contributed by the subjects. Interviews were conducted at the subjects' homes, places of employment, or other convenient locations, e.g., restaurants, and lasted 60-90 minutes. Subjects living in the Montgomery area were often interviewed at the Lab's downtown office there. Payment for the 3-6 and 12-15 month interviews was $5; for those subjects in the intensive study area, payment was $2 for each additional monthly interview conducted at the downtown office.

The intensive interviewing was terminated August 15, 1972, and the downtown office was closed. The cut-off date for all other interviewing was January 1, 1973. As of January 1, 1973, the interviews given totaled: 142 prerelease interviews, 123 interviews at the 3-6 month interval, 89 interviews at 12-15 months, and 280 monthly interviews.

Preliminary Findings and Early Trends

The data from this study have been keypunched for computer analysis and some initial analysis has been done. Computer analysis will be completed in Phase IV and a final report prepared at that time. The present findings should be considered preliminary, for these are subject to change as analysis continues.

All of the 142 subjects eligible are included in this data discussion. Subjects are considered ineligible when they have absconded, recidivated, died, or left the study area. Those who return to the area are then considered eligible again. Another limitation on eligibility is that some subjects may not have been released long enough to be interviewed at the specified time intervals. Thus the *N*s in the following discussion may vary somewhat as a result of subject eligibility.

One of the main concerns of the 1971 Follow-Up was the effect of treatment on postrelease law-violating behavior. A cumulative record of law enforcement encounters was kept, and all information was verified by checking with the Alabama State Board of Corrections and local city, county, state, and federal law enforcement agencies. Disposition of cases was verified through the respective courts and records. Table 2 shows the law violation status of the study groups as of January 1, 1973.

The data in Table 2 indicate that the ecological group tends to be the lowest in major law violations although high in minor violations. The *N* for this group is small, however, and many of these men have not been released as long as the other subjects. MDT training and the combined MDT-ecological treatment appear to be least effective in terms of all law enforcement encounters, but none of the trends are statistically significant. The law violation percentages of the control group are similar to those of the treated groups.

TABLE 2

Cumulative Percentage of Law Violation and Encounters as of January 1, 1973*

Law Enforcement Encounter	Groups				
	MDT N = 54	Ecology N = 11	MDT & Ecology N = 13	State Trade N = 19	Control N = 33
Major law violators (recidivists) (includes absconding)	50%	18%	46%	32%	36%
Major and minor law violators combined	65%	64%	54	53%	52%
All law enforcement encounters (includes above plus pick-up on suspicion, charges dropped, etc.)	81%	73%	77%	63%	64%

*Subjects had been released for 11 to 26 months.

Employment was another concern in this study, and all of the follow-up instruments contained items directly reflecting this concern. Employment status at 12 months for all eligible subjects is shown in Table 3. Men attending school more than half-time were not included in the percentage data. The combined MDT-ecological group has the highest percentage employed (100%); 33% of these were working on training-related jobs. The state trade school group followed with 82% employed, of whom 33% were working on training-related jobs. Only 17% of those employed in the MDT group had jobs related to their training. Because the *N*s in this table are small, the data should be interpreted with caution.

TABLE 3

Percent of Subjects Employed at the End of their First Year in the Free World

Groups	Percent Employed
MDT (N = 39)	62
Ecology (N = 6)	67
MDT & Ecology (N = 7)	100
State Trade (N = 12)	82
Control (N = 25)	67

TABLE 4

Employment Data Collected on Subjects at their 12-15 Month Interview

Items	Groups				
	MDT N = 39	Ecology N = 6	MDT & Ecology N = 7	State Trade N = 12	Control N = 25
Total income					
Mean	$3,255	$3,923	$4,097	$5,039	$3,825
Median	$3,800	$3,943	$4,610	$5,776	$3,500
Range	$0-10,000	$1,390-6,532	$2,076-5,976	$654-8,300	$300-11,000
Amount saved					
Mean	$78	$207	$240	$145	$312
Median	$0	$50	$30	$0	$0
Range	$0-700	$0-1,000	$0-750	$0-750	$0-5,000
Amount of debt					
Mean	$529	$769	$1,164	$930	$1,019
Median	$250	$35	$120	$400	$310
Range	$0-3,000	$0-4,000	$0-5,525	$0-3,100	$0-9,475
Percent of time employed full time					
Mean	65	78	80	77	76
Median	75	93	98	88	86
Range	0-100	0-100	25-100	20-100	0-100
Number of full-time jobs held					
Mean	2.5	2.8	2.7	2.6	2.4
Median	2.0	2.5	2.0	2.0	2.0
Range	0-6.0	0-7.0	1-6.0	1-5.0	1-6.0

The particular details of employment were collected with the postrelease interview guide and included related aspects, such as money management. Table 4 presents data collected at the 12-15 month interview for the five study groups. Again, the *N*s for some groups are relatively small. It should be noted that the first item represents total income for the period rather than salary.

TABLE 5

Employment Data Collected on MDT Trainees after Release 12-15 Months Based on Vocational Trade Area

Items	Vocational Area			
	Butchers N = 14	Barbers N = 6	Welders N = 18	Refrigeration Repair N = 8
Total income				
Mean	$2,714	$3,749	$3,642	$3,700
Median	$2,838	$3,280	$4,076	$3,470
Range	$0-5,440	$0-7,000	$276-10,000	$2,076-5,976
Amount saved				
Mean	$10	$213	$75	$245
Median	$0	$30	$0	$6
Range	$0-90	$0-700	$0-500	$0-750
Amount of debt				
Mean	$332	$846	$494	$1,271
Median	$212	$120	$100	$600
Range	$0-1,745	$0-2,200	$0-3,000	$0-5,525
Percent of time employed full time				
Mean	59	76	70	69
Median	52	87	75	64
Range	0-100	0-100	6-100	25-100
Total number of full-time jobs held				
Mean	2.2	2.8	2.5	2.9
Median	2.0	2.5	2.0	2.0
Range	0-5	0-6	1-6	2-5

The MDT group was also examined in terms of the specific vocational training areas, as shown in Table 5. The data indicate that butchers were employed less than any other group, with barbers being employed the largest percentage of time. The groups who saved the most (barbers and refrigeration repair) also had the largest debts. None of the trends in Tables 4 and 5 are statistically significant, however.

Other data and trends may be summarized as follows:

1. Employment continues to be one of the most significant factors in postrelease adjustment.
2. Institutional programs (MDT training and the token economy study) thus far have shown only small effects on measured postrelease behavior.
3. A clear-cut relationship between law-violating behavior and scores on the EDS and MBR is shown. Major law violators have much higher scores than non-law violators, with the minor law violators falling in the middle.

Preliminary Study of the 'Convict Culture'

As a spin-off from the '71 follow-up study, the Lab began an initial analysis of the "convict culture" in terms of the influence of institutional experiences upon postrelease behavior. By measuring the degree of an inmate's adherence to the value system of the inmate population, it may be possible to predict the success of his postrelease adjustment and, ultimately, recidivism.

On the basis of interviews with experienced prison staff, a preliminary checklist was set up and executed by interview with inmates. It dealt with behavioral adherence to the so-called "convict contra-culture" which is assumed to operate at cross purposes to rehabilitation efforts and the rules of the free world. This checklist measured in large part the inmate's interactions with people, other inmates, prison staff and administrative personnel, and free-world people.

The checklist items were in the form of statements, e.g., "I am not treated fairly by the prison staff." The respondent indicated on a scale of 1 to 5 the degree of his agreement with the statement. The maximum score was 185, with a high score indicating greater adherence to the convict culture.

The checklist was administered initially to 15 inmates and later to 80 others. These men had been selected by the prison staff as being "solid" (adhering to the inmate value system) and "non-solid." The scores of the "solids" compared to those of the "non-solids" were not significantly different at a reasonably low level of probability (.05 to .10), raising some question as to the validity of the use of institutional staff ratings of "solidness."

The group of 80 men who had been interviewed with the checklist were followed up after release. The initial data on their postrelease law violations compared to their checklist scores were as follows:

Scores (Maximum = 185)	Non-Law Violators	Law Violators
Hi (98 and above)	23	20
Lo (97 and below)	27	10
Total	50	30

Thus the scores on the checklist moderately but significantly predicted postrelease law-violating behavior.

The next step in the study was the development of an instrument based on behavioral data which could be gathered in an intensive interview or by direct observation. An interview guide, the Record of Institutional Behavior (RIB), was designed to record and evaluate in-prison behavior and the effects of this behavior on postrelease success. The preliminary form of this guide covered four major areas of in-prison behavior: (1) "getting-along" behaviors, (2) friends, (3) drug use, and (4) sexual interactions.

The interview guide has been administered to subjects in the '71 Follow-Up, and, while data are insufficient to support any major conclusion, early results are encouraging. There seems to be a wide, if not mutually exclusive, disparity in the in-prison behaviors of recidivists and non-recidivists. Continued refinement of the interview guide is planned before it will be tested as a potential predictor of postrelease success.

A short technical report on the preliminary findings of the convict culture study has been drafted.

Products

Many papers and technical reports have been prepared describing the methodology and design of the follow-up studies and the instruments developed and used in these studies. The following are representative:

Prolegomena to the measurement and assessment of human behavior. Focuses on the evaluation of gross human behavior, using a four-stage approach to behavioral analysis. Discusses the application of the EDS to the prediction of recidivism.

The measurement and prediction of criminal behavior and recidivism: The Environmental Deprivation Scale (EDS) and the Maladaptive Behavior Record (MBR). Describes the use of the EDS and MBR in the EMLC's follow-up studies. Includes data which demonstrate the capacity of these instruments to measure and predict criminal behavior and recidivism.

Evaluation of criminal behavior: Theory and practice. Preliminary report on a longitudinal follow-up study conducted by the EMLC (the final report on this study is the following entry). Presented in two parts: "The Functional Analysis of Criminal Behavior" and "Long-Range Follow-Up Validation in the Measurement of Criminal Behavior."

A longitudinal follow-up investigation of the postrelease behavior of paroled or released offenders. Reports the results of a three-year postrelease follow-up study conducted by the EMLC. Describes the study design, methodology, and the instruments used. A technical appendix is being prepared for this report.

The Maladaptive Behavior Record (MBR): A scale for the analysis and prediction of community adjustment and recidivism of offenders. Describes the use of the MBR in the EMLC's follow-up studies to assess behavior and predict recidivism. Includes a copy of the instrument.

A manual for the use of the Environmental Deprivation Scale (EDS) in corrections: The prediction of criminal behavior. Explains the use of the EDS to predict law violation and resultant recidivism. Includes information on behavioral interview techniques, scoring the instrument, interpretation of score, and validity and reliability data. A copy of the instrument and interview excerpts are included.

Other anticipated products include a guide for behavioral interviewing and a "how-to" manual for the use of the MBR.

Dissemination for utilization–a first step in the process of making project findings available to others.

utilization

Communication of Findings

The objective of the EMLC's Utilization Division is to communicate the Lab's findings, often its methodology, to a variety of target groups. These primarily include policy makers, administrators, and practitioners in the fields of corrections, education, psychology, and sociology, but also include the prisoners themselves and college and university students. The Lab makes every effort to ensure the use of its findings and procedures by using a broad range of media for dissemination. The various forms which this utilization effort takes are described in the following sections.

Products Completed

In an effort to close the time gap between a project's completion and the report on its findings, the Lab in Phase III worked to provide progress reports on all projects, including preliminary findings and analysis of data trends whenever possible. Three such progress reports were completed, as well as the final report describing Phase II. The Lab's bimonthly newsletter, *Pacesetter*, reported current progress by the EMLC and in the field of corrections in general. Additionally, technical reports on individual projects and instruments were prepared, some of which were printed during Phase III. The present report is also a part of this effort to provide up-to-the-minute reporting on Lab projects and findings. Several of the products completed in Phase III were listed for each project in the earlier sections of this report. Additional products are as follows:

- *RRF '72*. An annotated publications list designed to facilitate selection of pertinent information by those requesting this information. It has been widely disseminated, both by mail and as handouts.
- *Employment Service (ES) Guide*. Gives guidelines for ES counselors in developing jobs for ex-offenders, developing and placing trainees for those jobs, and providing follow-up in the form of supportive services and record keeping.
- *EMLC Findings Sheets and Briefs*. One-page reports designed to give an overview of some of the Lab's projects and their findings. Two findings sheets summarized the Lab's bonding project and the results of a nationwide home furlough study. An EMLC brief on the programmed instructional materials developed by the RRF was also printed.
- *Bonding Project Final Report*. Describes the Lab's participation in a national bonding project which led to legislation providing for fidelity bonding for ex-offenders.
- *Individually Prescribed Instructional (IPI) System Revisions*. Changes in the system and materials available required the revision of the Establishing Guide and preparation of the IPI Prescribing Catalog supplement. Notices of the changes in the IPI System and the availability of the supplement were mailed to all known holders of the system.

Due to an increased demand that staff time be used in other kinds of dissemination, the newsletter *Intervene* was temporarily discontinued after two issues were prepared in Phase III. The audience served by this newsletter, i.e., Draper staff and inmates, was judged too small to warrant the time necessary to prepare *Intervene* on a bimonthly

schedule. Instead, staff energies have been more fully devoted to *Pacesetter*, which has a much broader audience.

Products in Progress

The nature of the Lab's projects often prevents their completion coincidental with the end of a particular phase of the Lab's funding. Several products which are currently in progress have been described in earlier sections of this report, e.g., the technical report on the token economy study and correctional officer training. Descriptions of other major products which are in progress follow:

- *'71 Follow-Up Study Report*. Describes the second of the Lab's longitudinal follow-up studies, using three experimentally treated and two control groups.
- *Correctional Surveys*. Reports to be prepared on the results of four correctional surveys which sought information concerning: (1) Use of behavior modification in adult corrections, (2) study-release programs for adult felons, (3) employment of ex-offenders in corrections, and (4) "good time" policies in adult correctional institutions. The survey questionnaires were sent to 50 state correctional systems, to Guam, Puerto Rico, the Virgin Islands, the Canal Zone, and to the District of Columbia and New York City Departments of Corrections. The results are presently being tabulated.
- *Individualized Reading System for Adults (IRSA)*. A graduated system of six self-paced tracks designed to cover a broad range of reading needs, with initial track placement determined by the Tests of Adult Basic Education (TABE) locator test. On-site tryout of the system has shown dramatic reading gains with most subjects, but revisions are needed before the system is ready for release.

Publication Distribution

The Lab disseminates its publications by mail and as handouts on site and at professional meetings. In Phase III the number distributed was 6,896, of which 4,900 were mailed and 1,906 given out as handouts. These figures do not include the *Pacesetter* which was mailed as part of the regular newsletter mailing, IPI and related materials, or the 8,500 copies of the *RRF '72* publications list which were sent as a special mailing.

Those who received publications were largely represented by the following areas: research (educational and psychological); corrections (adult), criminal justice; educators (including vocational and MDT) and students; community services, mental health; and juvenile corrections and services.

Visitors

A total of 826 people visited the EMLC during Phase III, receiving an orientation to previous RRF work and current Lab projects through films, slide presentations, and a tour of the facilities. Visitors often requested orientation to specific projects, notably the token economy, correctional officer training, the IPI System used in the contingency management study, and IRSA, the reading program.

Many of these visitors were educators and their college classes, representing the fields of law enforcement, psychology, and education. Correctional planners and administrators, many from

other states, also toured the Lab and talked with the staff. These visits provide an opportunity for interested groups to see the prison setting and to thus gain an appreciation and understanding of the complications involved which no progress report can fully convey.

Technical Consultation

The Lab's many publications usually provide sufficiently detailed information to satisfy the needs of most programs and agencies which ask for this information. Some products are specifically designed to give "how to" instructions, e.g., the guide which was developed for Employment Service counselors. Some groups, however, need special assistance in applying Lab experiences and findings in their particular problem areas and request technical consultation. During Phase III, the Lab has provided technical consultation in regard to the following areas:

- . . . work-release program planning and legislation
- . . . longitudinal follow-up methodology and instruments
- . . . behavior modification program planning and implementation
- . . . use of the IPI System to deliver adult basic education

Some specific examples of the Lab's technical consultation activities involved the following groups:

- . . . Draper Correctional Center staff with regard to guidelines for implementing a farm credit system to promote greater production on the institution farm.
- . . . University of Alabama, concerning a survey of mental health needs in the Alabama prison system.
- . . . Experimental Manpower Laboratory operated by Mobilization for Youth, Inc. in New York City to discuss possible future directions for their behavior modification programs.
- . . . Dallas County Juvenile Project, Selma, Alabama, regarding the use of the IPI System as part of their dropout prevention work.
- . . . Montgomery's WSFA television viewers, concerning work-release and its benefits to the public.
- . . . North Carolina correctional system on setting up a token economy.
- . . . Alto Correctional Facility in Athens, Georgia, as part of a team reviewing the academic and vocational programs and activities at the facility.
- . . . Georgia prison system with regard to the possible implementation of EMLC evaluative techniques and follow-up instruments to design training programs for the entire prison system.

These examples illustrate the diversity of the Lab staff's technical consultation, which provides information and assistance to a broad range of agencies and programs. Such consultation is an important part of the utilization effort.

Presentations to Professional Meetings

Many of the papers in the EMLC's publications list, *RRF '72*, were first prepared for presentation to various professional meetings. Such presentations are an important part of the Lab's dissemination

effort and are followed by numerous requests for the papers presented. Some of the major professional meetings at which Lab staff made presentations during Phase III are listed below.

- *American Psychological Association (APA), September, 1971, in Washington, D. C., and September, 1972, in Honolulu, Hawaii.* Lab staff spoke at these meetings on the EMLC's correctional officer training project, use of contingency management in institutional education programs, and the measurement and assessment of human behavior. Two other papers presented dealt with a comparison of formats for the presentation of programmed instructional material and the role of the psychologist consultant in educational design.
- *Annual Meeting of the Hawaiian Corrections Association, October, 1971, in Honolulu.* The Lab director made a keynote address on future directions for corrections and presented a technical paper describing the application of behavior theory to correctional practice, drawing on the Lab's projects and experiences.
- *Alabama Council on Crime and Delinquency (ACCD), September, 1971, in Birmingham.* The EMLC's training coordinator presented information about the correctional officer training project and the self-instructional training package being prepared.
- *National Society for Programmed Instruction (NSPI), March, 1972, in New Orleans.* Members of the Lab staff presented two papers describing the IPI System and its use in Lab studies.
- *American Personnel and Guidance Association (APGA), March, 1972, in Chicago.* The EMLC director and the research psychologist presented papers dealing with the token economy as a basis for correctional management and the use of contingency management in an individually prescribed instructional system.
- *Southeastern Psychological Association (SEPA), April, 1972, in Atlanta.* Staff members presented four papers at this meeting, two of which described the theory and procedures used in the longitudinal follow-up studies conducted by the EMLC. The other papers discussed the token economy as an alternative to aversive control and the use of individually prescribed instruction for academically deficient prisoners, relating these topics to Lab projects.
- *The 102nd Congress of Correction of the American Correctional Association, August, 1972, in Pittsburgh, Penusylvania.* The EMLC's training coordinator discussed the three cycles of correctional officer training, accompanying his paper with a slide presentation.

Conferences, Seminars, and Workshops

Another important utilization activity is presentation of and participation in conferences, seminars, and workshops, particularly those in the fields of corrections, psychology, and education. These meetings provide an opportunity to inform large groups of people about the Lab's work and in the case of workshops, to instruct them in the use of specific procedures and instruments developed by the Lab. The following are some examples of the Lab's participation in this form of dissemination:

- *IPI Workshops.* A total of nine workshops were held, both in Alabama and out of state, to

demonstrate the use of the IPI System. Workshop participants, mostly representing the fields of education and corrections, came from twelve states.

- *Behavior Modification Institute*. Several of the workshops for the 5th Annual Behavior Modification Institute held in Tuscaloosa, Alabama, in March, 1972, were conducted by Lab staff. These workshops dealt with the use of contingency management in basic education and vocational training, behavior modification in corrections, the evaluation of behavior modification programs, and teaching behavior modification techniques to paraprofessional personnel. EMLC staff members also attended other workshops.
- *OneAmerica Workshop*. The EMLC had the distinction of being chosen to host a workshop in August, 1972, for OneAmerica, a project which provides aid for female offenders recently released from prison. The Lab was chosen because of its extensive work in adult corrections, much of which has been directed toward assisting the offender once he is released to the community.
- *Seventeenth Southern Assembly*. The Lab's director was a participant in the conference presented by the American Assembly, Columbia University and Tulane University at Biloxi, Mississippi, in January, 1973. The conference topic was "The American Correctional System: Its Problems."
- *Gulf Coast Invitational Conference on Measurement in Education*. The Lab's director was one of the keynote speakers at this conference, presented in October, 1972, at the University of South Alabama in Mobile. His address dealt with the IPI System and its use in the EMLC's programs.
- *Regional Utilization Network Conferences*. Lab staff have participated in three conferences, the first of which was held at Oak Ridge, Tennessee, by the Oak Ridge Associated Universities. The second and third were held at the regional offices of the Department of Labor in Atlanta. Participants represented the Research and Development (R&D) projects in the southeast. The conferences were held to examine the feasibility of, and then to establish, a utilization network to promote the utilization of project findings by existing agencies and institutions. This network would also help to identify regional resources and facilitate interchange between manpower R&D groups, practitioners, and utilization planners.
- *Regional Seminar on Adult Basic Education*. The Lab director presented a paper describing the use of hardware and software in basic education programs in corrections at the seminar held in Pomona, California, in May, 1972.
- *Seminar on Corrections*. The EMLC's training coordinator presented a three-hour seminar for the Department of Psychology, University of Alabama at Tuscaloosa in September, 1971. This seminar dealt with the history of corrections and the problems of contemporary corrections, drawing heavily upon the work done by the EMLC at Draper.

Books and Book Chapters

EMLC staff members are sometimes invited to contribute chapers for books of readings being compiled dealing with corrections and applied psychology. In this phase work was begun on a chapter entitled "Principles of Behavior Modification Applied to Corrections," one of approximately 30 chapters in the *Handbook of Criminology* edited by Dr. Daniel Glaser. The book will be published by Rand McNally & Company.

The Lab's director has been asked to prepare a chapter for *Training in Behavior Modification*, edited by Dr. Martha E. Bernal. The book will be published in 1973 by Brooks/Cole and will deal with the kinds of training programs that are available for use with various kinds of problems which occur in a range of settings. The EMLC's contribution will describe the correctional officer training project conducted at Draper.

The EMLC was contacted by Scott, Foresman and Company for permission to reprint several excerpts from Lab publications dealing with the contingency management studies, including charts, figures, and tables. These will be part of a college text entitled *Control of Human Behavior: In Education, Volume III* authored by Roger Ulrich, Thomas Stachnik, and John Mabry. The text will be a collection of readings on techniques and new programs of behavioral education.

Notice has also been received that McGraw-Hill will publish a book entitled *The Design of Behavioral Experiments* written by EMLC research coordinator, Dr. W. O. Jenkins, and Dr. Nolan Hatcher. Many of the statistical methods used in the analysis of the Lab's follow-up data are described in this book.

Articles in Newsletters and Magazines

The Lab's publications and the papers presented by staff members at professional meetings often provide information for articles in newsletters and popular magazines. For example, the December 1972 issue of the newsletter *Offender Employment Review* carried a feature article describing the EMLC and its projects as bridging the gap between theory and practice in offender rehabilitation. The same issue also announced the availability of the EMLC's *Guide for Employment Service Counselors in Correctional MDT Programs.*

The Lab was also included in an article dealing with behavior modification which appeared in the March 1973 issue of *Playboy*. The article, entitled "Zap! You're Normal," describes the Lab's token economy study and briefly mentions the correctional officer training project and the effect the EMLC programs have had upon the institution.

Additionally, the editors of *Psychology Today* are planning an article based on the paper "New Directions in Corrections," the Lab director's keynote address to the Hawaiian Corrections Association. The dissemination of Lab findings in popular magazines such as these reaches a broad audience of readers who would not otherwise be aware of the Lab's correctional research.

Other Utilization Efforts and Directions

Audiovidual Presentations

Films and slide presentations dealing with the work of the EMLC were used in on-site orientation of visitors, as are other films related to corrections which are owned by the Lab. In addition, these

audiovisual materials were shown to civic groups, college and university classes, workshop participants, and correctional officer trainees. Cooperating agency personnel also borrowed these materials for use in various presentations.

University Teaching

As in earlier phases of the Lab, several members of the professional staff taught on a part-time basis at the Montgomery campus of Auburn University. The courses taught included psychology, sociology, penology, and criminology. Dissemination of the EMLC's findings through the channel of the university classroom has generated considerable interest in the Lab's work, involving a number of students in this work.

Several other staff members also taught on a part-time basis in the Alexander City State Junior College program for inmates which began at Draper late in Phase III of the EMLC. Two years of credit could be earned toward a full four-year college degree by participation in the program. The classes were taught in the evenings and used some of the Lab's physical facilities.

College Corps Program

To give college and university students an opportunity for practical experience in correctional research, the EMLC has continued its College Corps Program. College Corpsmen work at Draper for a quarter or semester, by arrangement with their respective schools, and receive credit for their work. Six Corpsmen participated in the program during this phase.

Graduate Thesis and Dissertation

EMLC follow-up data provided the basis for a master's thesis completed at Auburn University which evaluated the effects of MDT training by focusing on an intensive examination of the community performance of a small sample of released offenders. Some of the results of this study were included in the technical report on the '69 Follow-Up.

The EMLC also provided the data and staff assistance for a Ph.D. candidate from Florida State University for his dissertation dealing with the postrelease effects of MDT training, using computer and multivariate discriminant analysis. The computer outcomes from this dissertation were included in part in the technical report on the '69 Follow-Up and were found to agree with those resulting from the Lab's data analysis.

Course Development

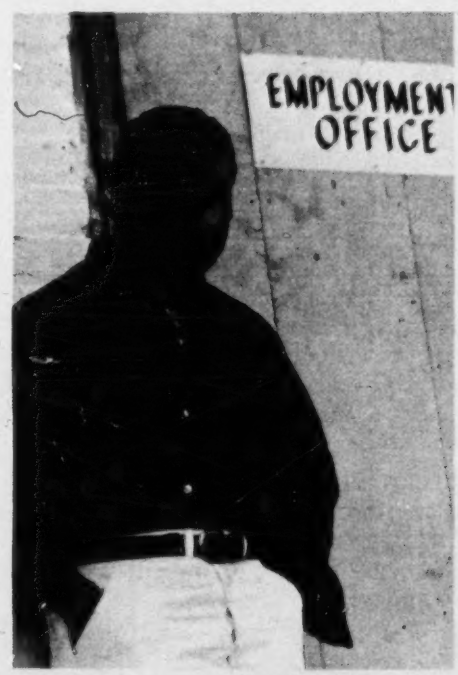
The EMLC's training coordinator was given a special two-week assignment to organize and write the Military Occupational Specialty (MOS) Course in Corrections for the United States Army Reserve. The course is designed as a Program of Instruction (POI) and will be utilized within the Third Army area in this coming year with option for inter-Army area usage.

Professional Papers Submitted for Publication

A paper prepared by the Lab's training coordinator and research psychologist, entitled "Survey of Home Furlough Practices in American Correctional Agencies," has been accepted by *Criminology* for publication in the May 1973 issue.

Additionally, the paper which the Lab director coauthored with Dr. Jeanne Moon and presented to the 1971 meeting of the American Psychological Association has been submitted for publication. The paper is entitled "The Psychologist Consultant in Educational Design."

Some comments on Phase III studies and a preview of Phase IV.



in conclusion...

Findings Within Study Limits

The Lab's projects have not been designed as the ultimate answers to the problems of corrections. Rather, they have been purposely limited to deal with specific problems within the restrictions imposed by the institution. This approach has seemed realistic in view of the staggering range and depth of the needs of the prison inmate–needs for vocational skills, personal-social skills, academic instruction, counseling, and job development, for example.

The projects have been further limited by being institutionally based, resulting in such unexpected events as unscheduled delays due to shakedowns (i.e., searches) for weapons and drugs. Often institutional concerns for security and harvesting of farm crops overrode project concerns for testing and data collection. Again, these are realistic limitations which are largely typical of many institutions in which a rehabilitation program might be based.

Thus the projects of the Lab, while experimental in design, have also had this practical aspect, with utilization of the findings always being an ultimate goal. In this context, the individual projects should be considered both in terms of what was accomplished and what was learned.

The Token Economy

One of the major and most ambitious projects of the Lab was the ecological study–the first token economy implemented in an adult penal institution. The study demonstrated that *the token economy model is a feasible and effective alternative to aversive control procedures to manage inmate behavior.*

The token economy encountered certain difficulties in its implementation, however. Like the special education program in an elementary school, the Unit found itself viewed by the prison administration as a handy place to assign the discipline problems, and project staff protests about such assignments were sometimes ignored. Thus the Unit population varied somewhat from that specified by the study design. The effect of this upon the data collected is difficult to determine.

Likewise, the institution's farm credit system may have affected the study data, particularly since Lab staff members were responsible for reporting the credits earned on the Unit and in basic education. The loss of credibility when the institution failed to deliver its reinforcers and to systematically follow procedures may have generalized to the Lab's study. Such effects, however, are difficult to assess.

The unsuccessful farm credit system did point out one thing–a certain amount of professional expertise and a great deal of staff commitment are vital to an effective token economy procedure. If these are missing, the results most likely will be discouraging; indeed, the target behavior may become even more of a problem if the treatment is misapplied.

The attempt of the token economy to increase its effectiveness by expanding the reinforcement menu was met with opposition by the institution, despite the fact that many potential reinforcers are readily available within the correctional setting. Thus the effect of such reinforcers as performance-contingent parole remain unexplored at this time. The token economy has proven itself to be both feasible and effective, but further study is needed to increase its effectiveness.

Correctional Officer Training

All three cycles of correctional officer training conducted by the Lab have shown that *correctional officers can, indeed, learn the basic principles of behavior modification as these were presented in the training. Moreover, this learning can take place in a relatively short time*. If the average time needed per booklet remains at 30 minutes after the complete series has been tried out, then each officer could be expected to spend 10 hours in the classroom to complete the booklets and approximately 20 hours in discussion sessions. The total 30 hours, spread over a ten-week period, should allow the correctional officers of most institutions sufficient time in which to arrange a comfortable schedule for work and training.

Scheduling is perhaps a lesser problem, however. The major difficulty the Lab encountered was the lack of any control of strong positive reinforcers within the institutional system which would fully involve the officers in their training. Encouragement and positive reinforcement from the institution's administration did not occur on a regular basis. Instead, officers were simply "told" to attend the sessions, received little recognition for having done so, and were expected to give their custody and security duties priority over training. At times, the officers were even verbally discouraged from participating in any way more active than mere attendance. The effects are predictable.

Ideally, correctional officers would not only be encouraged by their superiors to attend training and be recognized for having done so, but they should receive promotions in rank and salary increases for successful completion of training–which would include completion of practicum exercises. Total commitment by the institution is necessary for implementation of a successful training program.

Longitudinal Follow-Up Studies

Systematic follow-up studies of the released offender in the community had not been conducted prior to the Lab's studies. The EMLC found that *longitudinal follow-up can be conducted using a behavioral model to evaluate the effectiveness of institutional intervention programs. Additionally, instruments have been developed which can measure and predict criminal behavior*. The follow-up studies conducted by the Lab can be considered to provide a foundation for program assessment and planning.

One of the major difficulties encountered in the follow-up studies was providing the training necessary to use the behavioral interview techniques and instruments, since these are relatively new and little written information is available. One-to-one training of staff was used, a method which certainly cannot claim to be highly efficient in terms of the time necessary. "How-to" manuals are being developed to aid in training interviewers, and the possibility of conducting training workshops is being considered.

Analysis of the data collected also presented somewhat of a problem, since the data-gathering instruments were new and just being tried out and validated. Refinement of the instruments has been continuous as analysis proceeds, increasing the predictive capacity of several instruments. The interview guide, which gathers primarily demographic data, has also been revised to deal with questions most pertinent to the assessment of program effectiveness.

Utilization

The dissemination for utilization effort of the EMLC has been quite extensive, in spite of the limited time and funds available. Correspondence, newsletters, personal appearances by staff at meetings and speaking engagements, as well as the preparation of numerous papers, have created a great interchange of information from the Lab to inquiring people in corrections and related fields of study.

Specific Lab products, e.g., the IPI System, the Maladaptive Behavior Record, the Environmental Deprivation Scale, and the Employment Service *Guide*, to name a few, have been accepted and implemented by people in many states throughout the United States. In short, the utilization effort has been quite successful, including changes which have accrued within the Alabama correctional system related to input by EMLC staff. However, several things have emerged as keys to improved utilization.

Determining the specific audience to whom the publications speak has been a limitation to more effective implementation of Lab findings through dissemination. Related to the matter of audiences is the difficulty which has been encountered in attempts to generate effective dissemination plans for new publications.

One of the most significant facts which has evolved is the need for intensive work with administrative and operational staff at the *beginning* of a project if the findings of the research studies are to be implemented on a regular basis. This refers not only to the immediate host agency, but also to the related agencies which are involved in working with offenders, e.g., Probations and Parole, Employment Service, Vocational Rehabilitation, etc. The Lab has done a great deal of this kind of work to involve the significant groups and agencies, but there is an increasing need to explore feasible strategies to assure the effective implementation of research findings.

Proposed Directions for the EMLC

Based on what has been learned in previous EMLC projects, certain general areas for further development and study have emerged. The continued refinement of the behavior modification model ranks high amongst projects which warrant further exploration. The behavior modification model at the EMLC's present site has more than adequately demonstrated that institutional inmate behavior can be managed through these means, while simultaneously serving the needs of institutional control and custody. The next step is to provide the conditions for broader expansion of the techniques throughout the institution and also to correlate the target behaviors for institutional treatment more closely to those free-world behaviors which can keep the released inmate employed and productive. To do this, it is highly desirable, if not absolutely mandatory, that the environment for carrying out such a correlation allow the most detailed analysis of behavior possible.

A proposed site for carrying out the next phase in the development of the behavior modification model is an institution for youthful offenders located near the present site of the EMLC. The site will not only offer the controlled conditions necessary for optimal study findings, but the technical support staff of the institution will also augment the effective implementation of the next, more sophisticated stage of the program.

Another area for innovative work, based on many of the findings of the EMLC follow-up studies, is the development of an effective manpower model for community treatment of released offenders. What has become increasingly clear over the years is that programs which attempt to effectively treat the released offender in the free-world community environment must take a look at the individual and his particular behavioral strengths and weaknesses. Historically, programs have dealt with offenders in terms of gross behaviors and gross behavioral deficits. Vocational programs, counseling programs, and others have all too often attempted to fit all ex-offenders into a mold of problems and treatment solutions, regardless of individual variations of behavior. Yet, of course, what causes one man to commit a crime is not necessarily what causes another man to commit a similar crime. One man steals for money, another steals for prestige, another steals for peer acceptance, another may steal because he has been trained to do so, and still others may steal because it is the only way they know of getting what they want. For some of these cases, gaining a vocational skill and earning a living may be a solution, or a partial solution. For others, a vocational skill and whatever monies it can offer may miss the mark entirely.

A proposed affiliation with the psychology department of University of Alabama in the near future will allow the implementation of such an individualized community program. Selected EMLC staff are currently planning to maintain an office on the university campus and to begin developing the community manpower model for released offenders. The university site seems extremely advantageous because of the resources which it can offer, e.g., the computer analysis of data, technical support staff, and concurrently developing criminal programs. The potential of better access to national funding sources and increased utilization of Lab findings also make the university affiliation desirable.

The overall goal of this project is to develop an effective community model for the employment of youthful ex-offenders in the community work force. Specifically, the objective is to develop a manpower model for receiving, motivating, training, placing, and following up youthful ex-offenders for jobs in the community work force. Sub-objectives are: (1) to develop a model for the cooperative participation of the University of Alabama in this manpower crime prevention and control program, and (2) to develop procedures for the effective participation of employers in the project for the job training and placement of ex-offenders.

Plans for the next phase of the EMLC also include continuing work in the adult correctional institution–at Draper Correctional Center. Two projects are planned; one is a continuation from Phase III and the other is a new project. The continued project is the completion of the correctional officer training package. Approximately five of the original trainees from the just completed cycle of training will review the materials which they have already been through, then complete the remaining booklets (10), and finish up their training by conducting practicum exercises.

The new project which will be carried out at Draper will be the assessment of the work-release program of the Alabama Board of Corrections. The assessment will focus on the ex-offender's specific

postrelease behavioral adjustment. The instruments for doing such an assessment have been developed by the EMLC in its own follow-up work. They include the Environmental Deprivation Scale (EDS) and the Maladaptive Behavior Record (MBR) and others.

The proposed work-release project is expected to yield a definitive, objective, and systematic method of collecting and comparing data. The analysis of these data will supplement the work-release staff's knowledge so that more meaningful decisions can be made regarding the program's operation. Intervention, e.g., counseling, prevocational training, and vocational training, can then be made more systematic. Based on these data, more appropriate changes in participant selection criteria will also be possible. Information from the postrelease follow-up will be made available to a number of related state and local agencies and to the work-release staff so that any postrelease intervention can take place with specific, behavioral reference points. The project is intended to establish an indefinite ongoing program assessment for the Alabama Board of Corrections.

Concurrent with the major research efforts of the Lab, two specific learning systems merit continued work. The Individually Prescribed Instructional (IPI) System, a basic education delivery system developed by the Lab and already widely utilized, will continue to be refined. The system will be used in the basic education component of the behavior modification program described earlier.

A more recent development of the Lab, the Individualized Reading System for Adults (IRSA), will also be further developed. IRSA has demonstrated its effectiveness in creating remarkable changes in reading level for Draper trainees, and it can be adapted very well to the similar population at the Alabama Industrial School (AIS), the institution for youthful offenders which is being considered as a site for some of the projects in the next phase of the EMLC.

In conjunction with the development of the learning systems, a great deal of work has also been devoted to generating an effective motivational system to complement IPI and IRSA. The system which has been explored, the contingency management system, will be implemented in future uses of the IPI System and IRSA. As is the case with offender trainees at Draper, the population at the Alabama Industrial School will also be able to benefit from individualized motivation procedures which can produce learning achievement in a minimum of time.

The completed systems, both IPI and IRSA, as well as the methodology for contingency management, are highly exportable products from the Lab. The IPI System has already been exported to a considerable extent, and IRSA and the contingency management procedures show the same promise.

In summary, the EMLC in the next phase will be continuing to explore the research areas which have shown promise in preceding work. The research during this proposed phase will be carried out at three different sites: at Draper, where the EMLC has been for the last three phases of operation; at Mt. Meigs, Alabama, the site of the Alabama Industrial School; and at the University of Alabama campus, in conjunction with the Department of Psychology. The behavior modification program, probably in the form of a token economy, will be at AIS, the community treatment project will be operated with the university, and the correctional officer training project and the work-release evaluation will be carried out at Draper.